

## CLAIMS

1. A scheduler device (2) for scheduling the transmission of data from a plurality of queues ( $B_1, B_2, B_3$ ) in a source node (1) to a plurality of destination nodes ( $N_1, N_2, N_3$ ) via a plurality of outlet ports ( $P_1, P_2, P_3, P_4$ ) from said source node (1), each of said outlet ports ( $P_1, P_2, P_3, P_4$ ) being associated with a resource ( $OR_1, OR_2, OR_3, OR_4$ ), the data being transmitted via said resource to said destination node ( $N_1, N_2, N_3$ ), each of said nodes receiving data from all or some of said plurality of resources ( $OR_1, OR_2, OR_3, OR_4$ ), said scheduler device (2) being **characterized in that** it has a plurality of servers ( $S_1, S_2, S_3, S_4$ ), each of said servers being associated with a respective one of the resources of said plurality of resources ( $OR_1, OR_2, OR_3, OR_4$ ) and each of said servers including scheduler means, said scheduler means being independent for each of said servers.
2. A scheduler device (2) according to claim 1, characterized in that said scheduler means comprise a plurality of stages ( $L_1, L_2, L_3$ ) corresponding respectively to a plurality of scheduling schemes using different criteria.
3. A scheduler device (2) according to claim 1, characterized in that said scheduling means comprise cyclical scheduling means of the round robin type.
4. A scheduler device (2) according to claim 1, characterized in that said scheduling means comprise weighted fair queuing (WFR) scheduling means.
5. A scheduler device (2) according to claim 1, characterized in that said scheduling means are dependent on a set of static and/or dynamic weights.

6. A scheduler device (2) according to claim 1,  
characterized in that said scheduler means are dependent  
on a first set of weights, each of said weights  
representing the percentage of said resource allocated to  
5 each of said nodes of said plurality of nodes.

7. A scheduler device (2) according to claim 5,  
characterized in that said scheduler means depend on a  
second set of weights, each of said weights representing  
10 the relative weight of the traffic of each of said nodes  
relative to the total traffic of the plurality of said  
nodes.

8. A node (1) including a scheduler device (2) according  
15 to claim 1, the node comprising a plurality of queues ( $B_1$ ,  
 $B_2$ ,  $B_3$ ) for sending data to a plurality of destination  
nodes ( $N_1$ ,  $N_2$ ,  $N_3$ ), and a plurality of outlet ports ( $P_1$ ,  
 $P_2$ ,  $P_3$ ,  $P_4$ ).

20 9. A data transmission system (10) including at least one  
source node (1) according to any preceding claim.